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EXAMINER

AMADIZ, RODNEY

ART UNIT

PAPER NUMBER

2629

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori et al. (U.S. Patent 5,912,649—herein referred to as “Hattori”) in view of Yokoyama (U.S. Patent 6,429,599—herein referred to as “Yokoyama”).

As to **Claim 1**, Hattori teaches a three-dimensional image display device comprising: at least one transmissive light-emitting display panel (***Fig. 1, Reference Number 20 and Col. 2, lines 46-57***); and a second light-emitting display panel located behind said transmissive light-emitting display panel (***Fig. 1, Reference Number 10 and Col. 2, lines 25-45***), wherein each of said transmissive and second light-emitting display panels includes patterned conductors (***Fig. 5, Reference Numbers 11 and 15—For the second light emitting display; for the transmissive light emitting display the conductive pattern is 21 and 25—See Fig. 1***), wherein each of the patterned conductors includes a plurality of light-emitting portions (***Fig. 5, note intersection of 11 and 15 for the second light emitting display and the intersection of 21 and 25 for the transmissive light emitting display panel***) and a bus line extending in a horizontal or vertical direction and bridged and connected to the light-emitting portions so that the light-emitting portions of patterned conductors are arranged

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in two dimensions (**See Fig. 5, and note arrangement of conductors 15 and 11**), and wherein each of the light-emitting portions includes a light-emitting layer exhibiting electroluminescence (**Col. 2, lines 40-45 and 53-57**).

Hattori fails to teach the light-emitting layer made of an organic compound. Furthermore, Hattori also fails to teach each of the patterned conductors formed into a zigzag. Examiner cites Yokoyama to teach that the use of organic material in electroluminescent display panels is well known (**Yokoyama—Col. 1, lines 10-15**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the light-emitting layer of an organic compound as taught by Yokoyama in the three-dimensional image display device taught by Hattori in order to simplify the manufacturing process through the use of inkjet patterning. In addition, Examiner cites Yokoyama to teach patterned conductors formed into a zigzag (**Yokoyama—Fig. 7, Reference Number 1**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the conductors into a zigzag pattern as taught by Yokoyama in the three-dimensional image display device taught by Hattori in order to help improve the image resolution therefore enhancing the display quality.

As to **Claim 2**, Hattori, as modified by Yokoyama, teaches the light-emitting portions of said transmissive light-emitting display panel are located in a periodic pattern (**Hattori—Fig. 1, note intersection of elements 21 and 25 as portrayed in Fig. 5 for the second light-emitting display panel**); and said second light-emitting display panel has light-emitting portions located in a periodic pattern (**Hattori—Fig. 5, note**

intersection of elements 11 and 15).

As to **Claim 3**, Hattori, as modified by Yokoyama, teaches the periodic patterns each have a matrix layout (***Hattori—Fig. 5, note matrix layout and Col. 2, lines 40-42 and 51-53).***

As to **Claim 4**, Hattori, as modified by Yokoyama, teaches the light-emitting portion of said transmissive light-emitting display panel includes at least one organic compound material layer (***Yokoyama—Col. 1, lines 10-15)*** made of an organic compound in contact with the light-emitting layer and supplying holes or electrons to the light-emitting layer (***Hattori—Col. 2, lines 56-57-note that electron movement is inherent when current is applied to the electrodes)***, and a pair of transparent electrodes sandwiching the light-emitting layer and the organic compound material layer there between (***Hattori—Fig. 1, Reference numbers 21 and 25)***; and one of the transparent electrodes is connected to the bus line (***Fig. 1, note bus lines 25).***

As to **Claim 5**, Hattori teaches the one transparent electrode connected to the bus line is a cathode (***Fig. 1, element 25).***

As to **Claim 6**, Hattori, teaches the light-emitting portion is formed in a rectangular form (***Hattori—Fig. 5, note that intersection of elements 11 and 15 is rectangular).***

As to **Claim 9**, Hattori fails to teach the patterned conductors having a pitch of P set there between, and the light-emitting portions alternately arrayed in the patterned conductors have a pitch P/2 set there between. Examiner cites Yokoyama to teach the patterned conductors having a pitch of P set there between, and the light-emitting

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portions alternately arrayed in the patterned conductors have a pitch $P/2$ set there between (**Fig. 4C and Fig. 7 and Col. 5, lines 40-61**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the patterned conductors with a pitch P and the light-emitting portions with a pitch $P/2$ as taught by Yokoyama in the three-dimensional image display device taught by Hattori so as to increase the diffusion of the luminescent materials thereby reducing the possibility of color mixture (**Yokoyama—Col. 5, lines 43-64**).

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori and Yokoyama as applied to claims 1-6 and 9 above, and further in view of Sotoguchi. (JP02002221730—herein referred to as “Sotoguchi”).

As to **Claim 7**, Hattori, as modified by Yokoyama, fails to teach the light-emitting portion is formed in a hexagonal form. Examiner cites Sotoguchi to teach a light-emitting portion formed in a hexagonal form (**Fig. 2**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the light-emitting portion into a hexagonal form as taught by Sotoguchi in the three-dimensional image display device taught by Hattori and Yokoyama in order to help eliminate the moiré fringe (**Sotoguchi—Solution**).

As to **Claim 8**, Hattori, as modified by Yokoyama, fails to teach the light-emitting portion is formed in a rhombic form. Examiner cites Sotoguchi to teach a light-emitting portion formed in a rhombic form (**Fig. 5**). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the light-emitting

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portion into a rhombic form as taught by Sotoguchi in the three-dimensional image display device taught by Hattori and Yokoyama in order to help eliminate the moiré fringe.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney Amadiz whose telephone number is (571) 272-7762. The examiner can normally be reached on M-F 8:30-5:00.

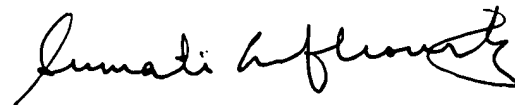
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

R.A.

9/28/06

Division 2629



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